



June 9, 2017

Via Certified Mail

Mr. Andrew Park
Hazardous Waste Programs Branch
US Environmental Protection Agency Region 2
290 Broadway, 22nd Floor
New York, New York 10007-1866

**Re: Response to 5/3/2017 Comments - USEPA
AOC 10: Truck Loading Rack Remedial Investigation Workplan
Hess Corporation Former Port Reading Complex (HC-PR)
750 Cliff Road
Woodbridge, Middlesex County, New Jersey
NJDEP PI# 006148
ISRA Case No. E20130449
EPA ID No. NJD045445483**

Dear Mr. Park:

Earth Systems, Inc. (Earth Systems) has prepared this letter on behalf of Hess Corporation (Hess) in response to the May 3, 2017 correspondence from the United States Environmental Protection Agency (USEPA) regarding the above referenced revised workplan. In addition to the May 3, 2017 comments, the USEPA also issued comments in August 2016 and the New Jersey Department of Environmental Protection (NJDEP) issued comments in September 2016. Hess addressed the comments from both the USEPA and NJDEP in November 2016. Subsequently, the USEPA requested a revised RIW in February 2017 (submitted in March 2017).

Section 3.1 Groundwater Investigation

EPA Comment # 1: *Figure 3b - The groundwater contour does not accurately reflect the groundwater level (12.370) detected at TR-4D. The contour must be revised to reflect the*

actual groundwater levels detected at the well and any other wells nearby. If necessary, additional wells need to be installed.

Figure 3c - The contour is based on the groundwater levels detected only from the two wells: TR-4DD (5.470); and PER-9DD (3.280). It is inadequate to reflect the groundwater contour for the deep zone. In order to accurately reflect the groundwater contour for the deep zone, groundwater levels from additional monitoring wells screened for the deep zone need to be obtained. The groundwater contour may have to be revised to reflect the actual groundwater levels detected for all the wells screened for the deep zone.

Earth Systems Response: The top of the casing elevation was mistakenly noted on the contour map. A revised contour map has been included with this letter with the correct groundwater elevation for TR-4D [4.8 feet below land surface (ft bls)]. Please note that this well is frequently inaccessible as it is often completely submerged due to localized flooding in the area.

Deep groundwater flow direction is currently based on water elevations collected from wells TR-4DD (5.47 ft bls), PER-9DD (3.28 ft bls), and AD-2DD (5.54 ft bls). Additional deep groundwater wells are proposed to be installed as part of vertical delineation of groundwater impacts in the truck loading rack. In the future, the new wells will also be utilized to evaluate groundwater flow direction.

Section 4.1 Soil Investigation

EPA Comment # 2: *If the results from the most outer or deepest soil samples as proposed show higher than the respective soil standards, additional soil samples further out or deep must be collected to complete the delineation of contaminated soils. Please confirm.*

Please justify why no SVOCs need to be analyzed for soil samples.

Earth Systems Response: As specified in the RIW, "If additional delineation is necessary, supplemental soil borings will be installed as appropriate."

Based on an evaluation of the 2016 groundwater analytical results, SVOCs (excluding 1,4-Dioxane) were only detected in excess of the Groundwater Quality Standards (GWQS) in groundwater samples collected from monitoring wells TR-2R, TR-4R, TR-4D, and TR-4DD. SVOCs were not detected in excess of the GWQS in the groundwater samples collected from the remaining 16 monitoring wells.



Section 4.2 Monitoring Well Installation

EPA Comment # 3: *Please provide isopleth maps showing the extent of shallow groundwater impacts for each of the contaminants detected above the respective standards. After a review of the maps, EPA/NJDEP will assess as to whether Hess' conclusion is adequate.*

Section 3.1.4 shows the elevated levels of SVOCs (particularly naphthalene and methylnaphthalene among others) detected at TR-TW-2; TR-TW-4; TR-TW-5; TR-TW-6; and TR-TW-7.

The November 2015 and November 2016 groundwater data provide no information concerning SVOCs in the areas. Therefore, groundwater samples need to be collected to confirm elevated levels of SVOCs in the areas and if elevated, further sampling must be performed to delineate the extent. Please respond.

If the results collected for the most outer and deep groundwater samples show higher than the respective standards, additional groundwater samples further out and deep must be collected to completely delineate the extent. At the conclusion of the sampling, isopleth maps delineating the extent of each of the contaminants detected above their respective standards covering the areas for the Truck Loading Rack, Detention Basin/Smith Creek and Aeration Basins must be provided to EPA/NJDEP for review and concurrence. Please confirm.

The proposed additional monitoring wells are inadequate to delineate the extent of metals since elevated metals were detected in the area of the Detention Basin/Smith Creek and the Aeration Basin. Therefore, additional wells need to be installed to delineate horizontal and vertical extent of metal contamination in the areas. Please respond.

Earth Systems Response: Isopleth maps will be prepared for shallow groundwater following implementation of the proposed groundwater investigation activities.

Temporary well points were installed in 2009. Based on the temporary well analytical results, additional monitoring wells were installed. SVOC concentrations may have been biased high in the temporary well points due to turbidity. All permitted monitoring wells have been sampled for SVOCs annually, in addition to metals and VOCs sampling. SVOC concentrations have been detected at significantly lower concentrations in the permanent monitoring wells compared to groundwater data from the temporary well points.

The groundwater data tables that were included with the report contained SVOC results for 2015 and 2016. In addition, the SVOC results were also summarized in the text of the report. The groundwater data tables that were included in the RIW have been attached to this letter as well.

If groundwater samples collected from the most outer and deep monitoring wells have results which exceed the GWQS, additional delineation will be conducted. As mentioned above, following implementation of the proposed groundwater investigation activities, updated isopleth maps will be prepared and provided to the NJDEP and EPA.

As outlined in the RIW, the GWQS for aluminum, iron, manganese, and sodium are not health based standards and are therefore based on secondary characteristics. Exceedances of beryllium, cadmium, and arsenic are likely due to background levels common to NJ or due to the presence of historic fill. Therefore, these metals are not considered contaminants of concern. Lead is the only metal which exceeded the GWQS and requires delineation. Among the truck loading rack wells, lead was detected in

excess of the GWQS of 5 parts per billion (ppb) only in groundwater samples collected from wells TR-4DD (5.2 ppb) and TR-5 (7.6 ppb). Based on the low concentrations detected in only two of the truck loading rack wells (and lead was either not detected or detected at concentrations less than the GWQS in the remaining truck loading rack wells), lead levels are considered delineated at the truck loading rack. Lead concentrations detected in wells PER-1, PER-2, AB-1, and AB-3 will be addressed as part of groundwater investigation activities conducted to address AOC 5: Aeration Basin and AOC 12: Smith Creek & Detention Basin.

Should you have any questions or require additional clarification or information, please contact me at 732-739-6444 or via e-mail at ablake@earthsys.net. If you have any questions relating to the project and schedule moving forward, you can also contact Mr. John Schenkewitz of Hess Corporation at 609-406-3969.

Sincerely,

Earth Systems, Inc.

A handwritten signature in blue ink that reads "Amy Blake". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Amy Blake
Sr. Project Manager

- c. Mr. Phil Cole, NJDEP Case Manager (via 3 hard copies)
Mr. John Schenkewitz – Hess Corporation (via e-mail)
Mr. Rick Ofsanko – Earth Systems (via e-mail)
Mr. John Virgie – Earth Systems (via e-mail)

TABLES

Table 1
Hess Corporation - Former Port Reading Complex
750 Cliff Road
Port Reading, New Jersey
Historic Temporary Well Sampling

Sample ID:	NJ Groundwater Criteria (NJAC 7:9C 7/07)	TR-TW-1	TR-TW-2	TR-TW-3	TR-TW-4	TR-TW-5	TR-TW-6	TR-TW-7	TR-TW-8	TR-TW-9	TR-TW-10	TR-TW-11	TR-TW-12	TR-TW-13	TR-TW-15	TR-TW-16	TR-TW-17
Sample Date		10/13/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/14/2009	10/21/2009	10/21/2009	10/22/2009	10/22/2009	10/22/2009	10/22/2009
Semi-Volatile Organic Compounds (SVOCs)																	
Benzo(a)anthracene	0.1	6.2	13.9	ND	7.14	ND	ND	ND	24.5	10.6	5.49	ND	ND	1.7	ND	0.436	ND
Benzo(a)pyrene	0.1	4.03	5.55	ND	ND	ND	ND	ND	34.6	3.04	1.49	ND	ND	0.76	ND	0.336	ND
Benzo(b)fluoranthene	0.2	9.4	9.22	ND	ND	ND	ND	ND	48.4	4.62	1.95	ND	ND	1.44	ND	0.555	ND
Benzo(k)fluoranthene	0.5	4	4.54	ND	ND	ND	ND	ND	22.3	2.09	0.922 J	ND	ND	0.287	ND	0.285	ND
Bis(2-Ethylhexyl) phthalate	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	5	4.22	8.65	ND	5.35	ND	ND	ND	18.9	6.11	2.54	ND	ND	1.41	ND	0.463	ND
Dibenzo(a,h)anthracene	0.3	0.555	3.11	ND	ND	ND	ND	ND	11.8	ND	ND	ND	ND	0.23	ND	ND	ND
1,4 Dioaxane	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	0.2	2.7	6.74	ND	ND	ND	ND	ND	21.7	3.42	ND	ND	ND	0.445	ND	1.28	ND
Naphthalene	300	15.3	134	175	15.7	341	437	357	23,500	1,550	1,350	ND	ND	728	3.51	0.946	2.04
Phenanthrene	100	10.7	91.5	ND	36.8	ND	4.62	5.24	2,270	82.9	33	ND	ND	51.5	ND	0.271	0.126
Pyrene	200	12.2	68.1	ND	11.6	ND	2.48	1.67	293	21.5	8.34	ND	ND	5.9	0.185	0.493	ND
bis(2-Ethylhexyl)phthalate	3	7.5	1,080	ND	15.4	ND	ND	ND	ND	ND	20.2	ND	ND	10.6	ND	5.4	ND
2-Methylnaphthalene	30	19.1	685	225	75.3	111	281	242	33,600	1,950	1,360	ND	ND	632	3.7	ND	1.4 J
Total Semi-Volatile (TIC)	500	286 J	5,660 J	5,473 J	7,520	6,580 J	7,490 J	3,339 J	106,000 J	20,520 J	16,120 J	ND	ND	7,570 J	241.1 J	11.1 J	21.8 J
Volatile Organic Compounds (SVOCs)																	
Benzene	1	ND	13.9	76.4	6.7	15,800	21,900	1,420	16,700	3,320	9,810	ND	ND	7,930	4.3	1.5	9.1
cis-1,2-Dichloroethene	70	0.3 J	ND	ND	ND	ND	ND	ND	ND	2,300	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	30	23.2	84.1	1.2	5,120	2,080	933	93,400	1,640	2,970	ND	ND	1,950	109	2.5	8.6
Methyl Tert Butyl Ether	70	14.4	16.7	94.2	74.8	455,000	1,080,000	1,360	365,000	335	252,000	ND	ND	175,000	3	6.7	49.4
Tert Butyl Alcohol	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	600	ND	2.3 J	33.9	1	ND	22,500	26.5	123,000	6,320	6,550	ND	ND	9,960	1.3	7.8	27.6
Vinyl chloride	1	ND	ND	ND	ND	ND	ND	ND	ND	171	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	1,000	1.2	14.3	793	0.98 J	4,870	10,300	65	533,000	7,530	11,600	ND	ND	7,370	186	7.2	25.9
Total Volatile (TIC)	500	732 J	2,040 J	1,914 J	275 J	21,100 J	ND	4,630 J	449,000 J	16,140 J	17,730 J	ND	ND	50,000 J	175.3 J	ND	48.2 J

Sample ID:	NJ Groundwater Criteria (NJAC 7:9C 7/07)	DC-TW-1	DC-TW-2	DC-TW-3	HS8-TW-1	HS8-TW-2	HS8-TW-3	HS8-TW-4	HS8-TW-5	HS8-TW-6	HS8-TW-7
Sample Date		6/20/2012	6/20/2012	6/20/2012	9/22/2010	9/22/2010	9/22/2010	9/22/2010	9/22/2010	9/22/2010	9/22/2010
Semi-Volatile Organic Compounds (SVOCs)											
Benzo(a)anthracene	0.1	0.205	1.99	2.01	ND	0.35	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.1	ND	0.900	1.34	ND	0.111	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.2	ND	0.895	1.69	ND	0.125	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.5	ND	0.550	1.28	ND	0.0704	ND	ND	ND	ND	ND
Bis(2-Ethylhexyl) phthalate	2	ND	3.54	2.47	NA	NA	NA	NA	NA	NA	NA
Chrysene	5	ND	1.26 J	2.64	ND	0.389	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	0.3	ND	ND	ND*	ND	ND	ND	ND	ND	ND	ND
1,4 Dioaxane	10	11.6	49.7	2.15	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	0.2	ND	0.325	0.976 J	ND	ND	ND	ND	ND	ND	ND
Naphthalene	300	26.5	281	6.33	ND	14.7	ND	ND	ND	ND	ND
Phenanthrene	100	16.1	39.9	18.5	0.113	62.3	0.68	ND	0.16	ND	ND
Pyrene	200	1.20	6.20	7.53	0.121	2.13	0.634	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	3	ND	3.54	2.47	2.5	3.2	7.7	ND	ND	ND	ND
2-Methylnaphthalene	30	50.6	132	2.39	ND	829	ND	ND	ND	ND	ND
Total Semi-Volatile (TIC)	500	434 J	2400 J	169 J	21.3	490	884.6	ND	6.7	ND	ND
Volatile Organic Compounds (SVOCs)											
Benzene	1	59.4	4,490	ND	0.41	490	ND	ND	ND	ND	ND
1,1-Dichloroethene		8.27	ND*	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	44.3	880	ND	ND	3	ND	ND	ND	ND	ND
Methyl Tert Butyl Ether	70	24.7	4,130	15.4	1.9	28.4	ND	0.76	2.1	ND	41.1
Tert Butyl Alcohol	100	NA	NA	NA	60.6	1,190	ND	ND	ND	ND	ND
Toluene	600	13.3	300	ND	188	6.4	21.4	0.37	8.8	12.3	3.1
Vinyl chloride	1	9.06	ND*	ND	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	1,000	114	2,020	ND	ND	1.4	ND	ND	ND	ND	ND
Total Volatile (TIC)	500	708 J	4,230 J	ND	ND	5,630	604	ND	ND	ND	ND

Table 2
AOC 10: Truck Loading Rack
Hess Corporation - Former Port Reading Complex
750 Cliff Road
Port Reading, New Jersey
2015 Groundwater Analytical Results

Client Sample ID:		NJ Groundwater Criteria (NJAC 7:9C 7/07)	NJ Interim Groundwater Criteria (NJAC 7:9C 11/15)2	TR-1R	TR-2R	TR-3RR	TR-4R	TR-4D	TR-4DD	TR-5R	TR-6	TR-6D	AB-4D	PER-2	PER-2D	PER-3	PER-3D	PER-9	PER-9D	PER-9DD	PER-10	PER-10D
Lab Sample ID:				JC8967-1	JC8967-4	JC8967-6	JC8967-8	JC8967-9	JC8967-10	JC8967-7	JC8967-2	JC8967-3	JC9218-4	JC9071-8	JC9071-9	JC9218-5	JC9218-6	JC9218-1	JC9218-2	JC9218-3	JC9218-7	JC9218-8
Date Sampled:				11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/20/2015	11/20/2015	11/20/2015	11/23/2015	11/23/2015	11/23/2015	11/23/2015	11/23/2015	11/23/2015	11/23/2015
Matrix:				Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
GC/MS Volatiles (SW846)																						
Acetone	ug/l	6000	-	ND (3.3)	ND (3.3)	ND (17)	ND (3.3)	ND (33)	ND (3.3)	ND (33)	ND (3.3)	ND (3.3)	ND (3.3)	8.2 J	ND (3.3)	ND (3.3)	ND (3.3)	ND (3.3)	ND (3.3)	ND (3.3)	ND (3.3)	ND (3.3)
Benzene	ug/l	1	-	ND (0.24)	912	3.8	52.5	6.1	ND (0.24)	1200	426	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	2
Bromochloromethane	ug/l	-	-	ND (0.37)	ND (0.37)	ND (1.9)	ND (0.37)	ND (3.7)	ND (0.37)	ND (3.7)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)
Bromodichloromethane	ug/l	1	-	ND (0.23)	ND (0.23)	ND (1.1)	ND (0.23)	ND (2.3)	ND (0.23)	ND (2.3)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	1.5	ND (0.23)
Bromoform	ug/l	4	-	ND (0.23)	ND (0.23)	ND (1.2)	ND (0.23)	ND (2.3)	ND (0.23)	ND (2.3)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
Bromomethane	ug/l	10	-	ND (0.42)	ND (0.42)	ND (2.1)	ND (0.42)	ND (4.2)	ND (0.42)	ND (4.2)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)
2-Butanone (MEK)	ug/l	300	-	ND (5.6)	11.6	ND (28)	ND (5.6)	ND (56)	ND (5.6)	ND (56)	ND (5.6)	ND (5.6)	ND (5.6)	ND (5.6)	ND (5.6)	ND (5.6)	ND (5.6)	ND (5.6)	ND (5.6)	ND (5.6)	ND (5.6)	ND (5.6)
Carbon disulfide	ug/l	700	-	ND (0.25)	ND (0.25)	ND (1.3)	ND (0.25)	ND (2.5)	ND (0.25)	ND (2.5)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	0.38 J	0.89 J
Carbon tetrachloride	ug/l	1	-	ND (0.22)	ND (0.22)	ND (1.1)	ND (0.22)	ND (2.2)	ND (0.22)	ND (2.2)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)
Chlorobenzene	ug/l	50	-	ND (0.19)	ND (0.19)	ND (0.93)	0.19 J	ND (1.9)	ND (0.19)	ND (1.9)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)
Chloroethane	ug/l	-	5	ND (0.34)	ND (0.34)	ND (1.7)	ND (0.34)	ND (3.4)	ND (0.34)	ND (3.4)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)
Chloroform	ug/l	70	-	ND (0.19)	ND (0.19)	ND (0.94)	ND (0.19)	ND (1.9)	ND (0.19)	ND (1.9)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	0.66 J	6.7	1.1
Chloromethane	ug/l	-	-	ND (0.41)	ND (0.41)	ND (2.0)	ND (0.41)	ND (4.1)	ND (0.41)	ND (4.1)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)
Cyclohexane	ug/l	-	-	ND (0.28)	39.4	ND (1.4)	62	ND (2.8)	ND (0.28)	25.4 J	4.9 J	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)
1,2-Dibromo-3-chloropropane	ug/l	0.02	-	ND (0.99)	ND (0.99)	ND (5.0)	ND (0.99)	ND (9.9)	ND (0.99)	ND (9.9)	ND (0.99)	ND (0.99)	ND (0.99)	ND (0.99)	ND (0.99)	ND (0.99)	ND (0.99)	ND (0.99)	ND (0.99)	ND (0.99)	ND (0.99)	ND (0.99)
Dibromochloromethane	ug/l	1	-	ND (0.15)	ND (0.15)	ND (0.77)	ND (0.15)	ND (1.5)	ND (0.15)	ND (1.5)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.15)	0.23 J	ND (0.15)
1,2-Dibromoethane	ug/l	0.03	-	ND (0.23)	ND (0.23)	ND (1.2)	ND (0.23)	ND (2.3)	ND (0.23)	ND (2.3)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	0.25 J	ND (0.23)
1,2-Dichlorobenzene	ug/l	600	-	ND (0.19)	ND (0.19)	ND (0.93)	ND (0.19)	ND (1.9)	0.21 J	ND (1.9)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)
1,3-Dichlorobenzene	ug/l	600	-	ND (0.23)	ND (0.23)	ND (1.1)	ND (0.23)	ND (2.3)	ND (0.23)	ND (2.3)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
1,4-Dichlorobenzene	ug/l	75	-	ND (0.27)	ND (0.27)	ND (1.4)	ND (0.27)	ND (2.7)	ND (0.27)	ND (2.7)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)
Dichlorodifluoromethane	ug/l	1000	-	ND (0.90)	ND (0.90)	ND (4.5)	ND (0.90)	ND (9.0)	ND (0.90)	ND (9.0)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)	ND (0.90)
1,1-Dichloroethane	ug/l	50	-	0.31 J	ND (0.17)	ND (0.86)	ND (0.17)	ND (1.7)	0.77 J	ND (1.7)	ND (0.17)	ND (0.17)	0.46 J	ND (0.17)	0.35 J	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	0.33 J
1,2-Dichloroethane	ug/l	2	-	ND (0.18)	ND (0.18)	ND (0.90)	ND (0.18)	ND (1.8)	ND (0.18)	ND (1.8)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)
1,1-Dichloroethene	ug/l	1	-	2.1	ND (0.51)	ND (2.6)	ND (0.51)	ND (5.1)	3.1	ND (5.1)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)
cis-1,2-Dichloroethene	ug/l	70	-	ND (0.27)	ND (0.27)	ND (1.4)	ND (0.27)	ND (2.7)	5.4	ND (2.7)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	0.39 J	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)
trans-1,2-Dichloroethene	ug/l	100	-	ND (0.65)	ND (0.65)	ND (3.2)	ND (0.65)	ND (6.5)	ND (0.65)	ND (6.5)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)
1,2-Dichloropropane	ug/l	1	-	ND (0.39)	ND (0.39)	ND (2.0)	ND (0.39)	ND (3.9)	ND (0.39)	ND (3.9)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)
cis-1,3-Dichloropropene	ug/l	-	-	ND (0.21)	ND (0.21)	ND (1.0)	ND (0.21)	ND (2.1)	ND (0.21)	ND (2.1)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)
trans-1,3-Dichloropropene	ug/l	-	-	ND (0.19)	ND (0.19)	ND (0.93)	ND (0.19)	ND (1.9)	ND (0.19)	ND (1.9)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)
Ethylbenzene	ug/l	700	-	ND (0.27)	365	ND (1.3)	111	ND (2.7)	ND (0.27)	100	49.9	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	0.28 J
Freon 113	ug/l	-	20000	ND (0.52)	ND (0.52)	ND (2.6)	ND (0.52)	ND (5.2)	ND (0.52)	ND (5.2)	ND (0.52)	ND (0.52)	ND (0.52)	ND (0.52)	ND (0.52)	ND (0.52)	ND (0.52)	ND (0.52)	ND (0.52)	ND (0.52)	ND (0.52)	ND (0.52)
2-Hexanone	ug/l	-	300	ND (1.7)	ND (1.7)	ND (8.7)	ND (1.7)	ND (17)	ND (1.7)	ND (17)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)
Isopropylbenzene	ug/l	700	-	ND (0.23)	12.9	ND (1.2)	10.5	ND (2.3)	ND (0.23)	16.4	1.2	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
Methyl Acetate	ug/l	7000	-	ND (1.9)	ND (1.9)	ND (9.4)	ND (1.9)	ND (19)	ND (1.9)	ND (19)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)
Methylcyclohexane	ug/l	-	-	ND (0.22)	33.3	ND (1.1)	46.5	ND (2.2)	ND (0.22)	10.2 J	2.1 J	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	1.1 J	ND (0.22)
Methyl Tert Butyl Ether	ug/l	70	-	ND (0.24)	2480	1530	7.2	9120	6.2	1370	6690	20.5	2.9	ND (0.24)	693	ND (0.24)	77	ND (0.24)	7.5	0.31 J	ND (0.24)	25.7
4-Methyl-2-pentanone(MIBK)	ug/l	-	-	ND (1.0)	16	ND (5.1)	4.1 J	ND (10)	ND (1.0)	ND (10)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Methylene chloride	ug/l	3	-	ND (0.73)	ND (0.73)	ND (3.6)	ND (0.73)	ND (7.3)	ND (0.73)	ND (7.3)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)
Styrene	ug/l	100	-	ND (0.27)	ND (0.27)	ND (1.4)	ND (0.27)	ND (2.7)	ND (0.27)	ND (2.7)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)
Tert Butyl Alcohol	ug/l	100	-	ND (2.8)	151	1850	101	39400	16.4	1240	1720	ND (2.8)	23	ND (2.8)	204	ND (2.8)	45.8	ND (2.8)	23.1	ND (2.8)	ND (2.8)	35
1,1,2,2-Tetrachloroethane	ug/l	1	-	ND (0.21)	ND (0.21)	ND (1.0)	ND (0.21)	ND (2.1)	ND (0.21)	ND (2.1)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)
Tetrachloroethene	ug/l	1	-	ND (0.40)	ND (0.40)	ND (2.0)	ND (0.40)	ND (4.0)	ND (0.40)	ND (4.0)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
Toluene	ug/l	600	-	ND (0.16)	449	ND (0.81)	37.2	ND (1.6)	ND (0.16)	19.2	8.7	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)
1,2,3-Trichlorobenzene	ug/l	-	-	ND (0.23)	ND (0.23)	ND (1.1)	ND (0.23)	ND (2.3)	ND (0.23)	ND (2.3)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
1,2,4-Trichlorobenzene	ug/l	9	-	ND (0.21)	ND (0.21)	ND (1.0)	ND (0.21)	ND (2.1)	ND (0.21)	ND (2.1)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)
1,1,1-Trichloroethane	ug/l	30	-	0.78 J	ND (0.25)	ND (1.3)	ND (0.25)	ND (2.5)	ND (0.25)	ND (2.5)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)
1,1,2-Trichloroethane	ug/l	3	-	ND (0.21)	ND (0.21)	ND (1.1)	ND (0.21)	ND (2.1)	ND (0.21)	ND (2.1)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)
Trichloroethene	ug/l	1	-	ND (0.22)</																		

Table 2
AOC 10: Truck Loading Rack
Hess Corporation - Former Port Reading Complex
750 Cliff Road
Port Reading, New Jersey
2015 Groundwater Analytical Results

Client Sample ID:		NJ Groundwater Criteria (NJAC 7:9C 7/07)	NJ Interim Groundwater Criteria (NJAC 7:9C 11/15)2	TR-1R	TR-2R	TR-3RR	TR-4R	TR-4D	TR-4DD	TR-5R	TR-6	TR-6D	AB-4D	PER-2	PER-2D	PER-3	PER-3D	PER-9	PER-9D	PER-9DD	PER-10	PER-10D
Lab Sample ID:				JC8967-1	JC8967-4	JC8967-6	JC8967-8	JC8967-9	JC8967-10	JC8967-7	JC8967-2	JC8967-3	JC9218-4	JC9071-8	JC9071-9	JC9218-5	JC9218-6	JC9218-1	JC9218-2	JC9218-3	JC9218-7	JC9218-8
Date Sampled:				11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/23/2015	11/20/2015	11/20/2015	11/23/2015	11/23/2015	11/23/2015	11/23/2015	11/23/2015
Matrix:				Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Acetophenone	ug/l	700	-	ND (0.40)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.38)	ND (0.38)	ND (0.37)	ND (0.38)	ND (0.39)	ND (0.36)	ND (0.36)	ND (0.38)	ND (0.36)	ND (0.36)	ND (0.36)	ND (0.36)	ND (0.38)	ND (0.36)	ND (0.36)
Anthracene	ug/l	2000	-	ND (0.21)	7.5	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)
Atrazine	ug/l	3	-	ND (0.46)	ND (0.45)	ND (0.45)	ND (0.43)	ND (0.45)	ND (0.45)	ND (0.43)	ND (0.45)	ND (0.45)	ND (0.42)	ND (0.42)	ND (0.45)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.44)	ND (0.42)	ND (0.42)
Benzaldehyde	ug/l	-	-	ND (0.74)	ND (0.71)	ND (0.71)	ND (0.69)	ND (0.71)	ND (0.71)	ND (0.69)	ND (0.71)	ND (0.71)	ND (0.67)	ND (0.67)	ND (0.71)	ND (0.67)	ND (0.67)	ND (0.67)	ND (0.67)	ND (0.69)	ND (0.67)	ND (0.67)
Benzo(a)anthracene	ug/l	0.1	-	-	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	ug/l	-	100	ND (0.34)	1.3	ND (0.33)	ND (0.32)	ND (0.33)	ND (0.33)	ND (0.32)	ND (0.33)	ND (0.33)	ND (0.31)	ND (0.31)	ND (0.33)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.32)	ND (0.31)	ND (0.31)
4-Bromophenyl phenyl ether	ug/l	-	-	ND (0.27)	ND (0.26)	ND (0.26)	ND (0.25)	ND (0.26)	ND (0.26)	ND (0.25)	ND (0.26)	ND (0.26)	ND (0.25)	ND (0.25)	ND (0.26)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.26)	ND (0.25)	ND (0.25)
Butyl benzyl phthalate	ug/l	100	-	ND (0.24)	ND (0.24)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.24)	ND (0.22)	ND (0.22)	ND (0.23)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.23)	ND (0.22)	ND (0.22)
1,1'-Biphenyl	ug/l	400	-	ND (0.30)	11.9	ND (0.29)	ND (0.28)	ND (0.29)	ND (0.29)	ND (0.28)	ND (0.29)	ND (0.29)	ND (0.27)	ND (0.27)	ND (0.29)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.28)	ND (0.27)	ND (0.27)
2-Chloronaphthalene	ug/l	600	-	ND (0.38)	ND (0.36)	ND (0.36)	ND (0.35)	ND (0.36)	ND (0.36)	ND (0.35)	ND (0.36)	ND (0.36)	ND (0.34)	ND (0.34)	ND (0.36)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.35)	ND (0.34)	ND (0.34)
4-Chloroaniline	ug/l	30	-	ND (0.33)	ND (0.32)	ND (0.32)	ND (0.31)	ND (0.32)	ND (0.32)	ND (0.31)	ND (0.32)	ND (0.32)	ND (0.30)	ND (0.30)	ND (0.32)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.31)	ND (0.30)	ND (0.30)
Carbazole	ug/l	-	-	ND (0.18)	6.2	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)
Caprolactam	ug/l	-	5000	ND (0.45)	ND (0.43)	ND (0.43)	ND (0.42)	ND (0.43)	ND (0.43)	ND (0.42)	ND (0.43)	ND (0.43)	10.2	8	0.87 J	3.3	ND (0.41)	16.6	8.9	1.6 J	4.2	ND (0.41)
Chrysene	ug/l	5	-	ND (0.18)	4.2	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)
bis(2-Chloroethoxy)methane	ug/l	-	-	ND (0.46)	ND (0.45)	ND (0.44)	ND (0.43)	ND (0.44)	ND (0.44)	ND (0.43)	ND (0.44)	ND (0.45)	ND (0.42)	ND (0.42)	ND (0.44)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.43)	ND (0.42)	ND (0.42)
bis(2-Chloroethyl)ether	ug/l	7	-	ND (0.48)	ND (0.46)	ND (0.46)	ND (0.44)	ND (0.46)	ND (0.46)	ND (0.44)	ND (0.46)	ND (0.46)	ND (0.43)	ND (0.43)	ND (0.46)	ND (0.43)	ND (0.43)	ND (0.43)	ND (0.43)	ND (0.45)	ND (0.43)	ND (0.43)
bis(2-Chloroisopropyl)ether	ug/l	300	-	ND (0.45)	ND (0.43)	ND (0.43)	ND (0.41)	ND (0.43)	ND (0.43)	ND (0.41)	ND (0.43)	ND (0.43)	ND (0.41)	ND (0.41)	ND (0.43)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.42)	ND (0.41)	ND (0.41)
4-Chlorophenyl phenyl ether	ug/l	-	-	ND (0.42)	ND (0.41)	ND (0.40)	ND (0.39)	ND (0.40)	ND (0.40)	ND (0.39)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.38)	ND (0.38)
2,4-Dinitrotoluene	ug/l	-	-	ND (0.35)	ND (0.34)	ND (0.34)	ND (0.33)	ND (0.34)	ND (0.34)	ND (0.33)	ND (0.34)	ND (0.34)	ND (0.32)	ND (0.32)	ND (0.34)	ND (0.32)	ND (0.32)	ND (0.32)	ND (0.32)	ND (0.33)	ND (0.32)	ND (0.32)
2,6-Dinitrotoluene	ug/l	-	-	ND (0.28)	ND (0.27)	ND (0.27)	ND (0.26)	ND (0.27)	ND (0.27)	ND (0.26)	ND (0.27)	ND (0.27)	ND (0.26)	ND (0.26)	ND (0.27)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)
3,3'-Dichlorobenzidine	ug/l	30	-	ND (0.62)	ND (0.60)	ND (0.59)	ND (0.57)	ND (0.59)	ND (0.59)	ND (0.57)	ND (0.59)	ND (0.60)	ND (0.56)	ND (0.56)	ND (0.59)	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.58)	ND (0.56)	ND (0.56)
1,4-Dioxane	ug/l	-	0.4	ND (0.79)	ND (0.76)	ND (0.75)	ND (0.73)	1.3	0.78 J	ND (0.73)	ND (0.75)	ND (0.76)	3.4	ND (0.72)	ND (0.75)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.74)	ND (0.72)	4.3
Dibenzofuran	ug/l	-	-	ND (0.25)	ND (0.24)	ND (0.24)	ND (0.23)	ND (0.24)	ND (0.24)	ND (0.23)	ND (0.24)	ND (0.24)	ND (0.23)	ND (0.23)	ND (0.24)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.24)	ND (0.23)	ND (0.23)
Di-n-butyl phthalate	ug/l	700	-	ND (0.64)	ND (0.62)	ND (0.61)	ND (0.59)	ND (0.61)	ND (0.61)	ND (0.59)	ND (0.61)	ND (0.62)	ND (0.58)	ND (0.58)	ND (0.61)	ND (0.58)	ND (0.58)	ND (0.58)	ND (0.58)	ND (0.60)	ND (0.58)	ND (0.58)
Di-n-octyl phthalate	ug/l	100	-	ND (0.28)	ND (0.27)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.27)	ND (0.25)	ND (0.25)	ND (0.26)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.26)	ND (0.25)	ND (0.25)
Diethyl phthalate	ug/l	6000	-	ND (0.26)	ND (0.25)	ND (0.25)	ND (0.24)	ND (0.25)	ND (0.25)	ND (0.24)	ND (0.25)	ND (0.25)	ND (0.23)	ND (0.23)	ND (0.25)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.24)	ND (0.23)	ND (0.23)
Dimethyl phthalate	ug/l	-	100	ND (0.29)	ND (0.28)	ND (0.28)	ND (0.27)	ND (0.28)	ND (0.28)	ND (0.27)	ND (0.28)	ND (0.28)	ND (0.26)	ND (0.26)	ND (0.28)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.27)	ND (0.26)	ND (0.26)
bis(2-Ethylhexyl)phthalate	ug/l	3	-	ND (0.61)	3	ND (0.58)	1.2 J	ND (0.58)	ND (0.58)	ND (0.57)	ND (0.58)	ND (0.59)	ND (0.55)	2	ND (0.58)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	3.5	ND (0.57)	ND (0.55)
Fluoranthene	ug/l	300	-	ND (0.18)	16.3	ND (0.17)	ND (0.16)	ND (0.17)	ND (0.17)	ND (0.16)	ND (0.17)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)
Fluorene	ug/l	300	-	ND (0.30)	18.1	ND (0.29)	ND (0.28)	ND (0.29)	ND (0.29)	ND (0.28)	ND (0.29)	ND (0.29)	ND (0.27)	ND (0.27)	ND (0.29)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.28)	ND (0.27)	ND (0.27)
Hexachlorobutadiene	ug/l	1	-	ND (0.43)	ND (0.41)	ND (0.41)	ND (0.40)	ND (0.41)	ND (0.41)	ND (0.40)	ND (0.41 (

Table 2
AOC 10: Truck Loading Rack
Hess Corporation - Former Port Reading Complex
750 Cliff Road
Port Reading, New Jersey
2015 Groundwater Analytical Results

Client Sample ID:		NJ Groundwater Criteria (NJAC 7:9C 7/07)	NJ Interim Groundwater Criteria (NJAC 7:9C 11/15)2	TR-1R	TR-2R	TR-3RR	TR-4R	TR-4D	TR-4DD	TR-5R	TR-6	TR-6D	AB-4D	PER-2	PER-2D	PER-3	PER-3D	PER-9	PER-9D	PER-9DD	PER-10	PER-10D
Lab Sample ID:				JC8967-1	JC8967-4	JC8967-6	JC8967-8	JC8967-9	JC8967-10	JC8967-7	JC8967-2	JC8967-3	JC9218-4	JC9071-8	JC9071-9	JC9218-5	JC9218-6	JC9218-1	JC9218-2	JC9218-3	JC9218-7	JC9218-8
Date Sampled:				11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/23/2015	11/20/2015	11/20/2015	11/23/2015	11/23/2015	11/23/2015	11/23/2015	11/23/2015	11/23/2015	11/23/2015
Matrix:				Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Copper	ug/l	1300	-	51.6 ^f	10.2	<10	23.5	<10	<10	<10	<10	<10	<10	27.7	<10	<10	<10	23.7	<10	<10	13.2	<10
Iron	ug/l	300	-	48800 ^f	1870	2620	4610	176	3490	3280	3340	487	2090	2460	<100	1010	131	5550	185	896	2040	123
Lead	ug/l	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	ug/l	5	-	22.0 ^f	4.3	5.1	22.8	<3.0	<3.0	<3.0	5.2	3.3	<30 ⁱ	5.5	<3.0	<6.0 ^h	<3.0	3.3	<3.0	<3.0	<3.0	<3.0
Magnesium	ug/l	-	-	22700 ^f	<5000	5080	<5000	17400	17000	46400	8010	5770	124000	<5000	22700	185000	130000	13600	38000	11900	15000	176000
Manganese	ug/l	50	-	742 ^f	423	591	147	291	138	1240	565	<15	21.4	120	29.4	253	194	70.8	48.5	63.6	98.3	656
Mercury	ug/l	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	ug/l	2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Nickel	ug/l	100	-	40.6 ^f	12	<10	18.1	<10	<10	<10	<10	<10	<100 ⁱ	<10	<10	<10	<10	<10	<10	<10	<10	15.2
Nickel	ug/l	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	ug/l	-	-	<20000 ^f	51800	<10000	18200	<10000	<10000	<10000	<10000	<10000	120000	<10000	<10000	55200	70100	<10000	12300	<10000	<10000	88800
Selenium	ug/l	40	-	<20 ^f	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Silver	ug/l	40	-	<20 ^f	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Silver	ug/l	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	ug/l	50000	-	40900 ^f	315000	30700	251000	117000	57200	192000	23300	20100	2230000	29600	69800	1540000	1110000	198000	227000	126000	160000	1320000
Thallium	ug/l	2	-	<4.0 ^f	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<20 ⁱ	<2.0	<2.0	<4.0 ^h	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/l	-	-	121 ^f	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Zinc	ug/l	2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	ug/l	2000	-	104 ^f	49.1	<20	289	<20	<20	<20	<20	<20	<20	66.2	<20	<20	<20	<20	<20	42.5	<20	<20
General Chemistry																						
Nitrogen, Ammonia	mg/l	3	-	<0.20	2.9	0.21	1.5	<0.20	<0.20	0.44	0.3	<0.20	6.1	0.56	<0.20	0.22	8.1	<0.20	0.88	<0.20	0.94	18.7

Table 3
AOC 10 - Truck Loading Rack
Hess Corporation - Port Reading Complex (HC-PR)
750 Cliff Road
Port Reading, NJ
2016 Groundwater Sampling Analytical Results

Client Sample ID:			NJ Groundwater Criteria (NJAC7-9C 7/07)	NJ Interim Groundwater Criteria (NJAC7-9C 11/15)	TR-1R	TR-2R	TR-3RR	TR-4R	TR-4D	TR-4DD	TR-5	TR-6	TR-6D	AB-4R	AB-4D	PER-2	PER-2D	PER-3	PER-3D	PER-9	PER-9D	PER-9DD	PER-10	PER-10D	
Lab Sample ID:					JC31908-3 11/16/2016	JC31908-4 11/16/2016	JC31908-10 11/16/2016	JC32172-6 11/21/2016	JC32172-7 11/21/2016	JC32172-8 11/16/2016	JC31908-11 11/16/2016	JC31908-12 11/16/2016	JC31908-13 11/16/2016	JC31999-14 11/17/2016	JC31999-13 11/17/2016	JC31908-5 11/16/2016	JC31908-6 11/16/2016	JC31908-14 11/16/2016	JC31908-15 11/16/2016	JC31908-7 11/16/2016	JC31908-8 11/16/2016	JC31908-9 11/16/2016	JC31999-9 11/17/2016	JC31999-10 11/17/2016	
Date Sampled:																									
Matrix:					Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
GC/MS Volatiles (SW846 8260C)																									
Acetone	ug/l	6000	-	-	ND (5.0)	ND (5.0)	ND (25)	84	ND (100)	ND (5.0)	ND (50)	ND (50)	ND (5.0)	ND (5.0)	ND (5.0)	9.2 J	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	10.3	
Benzene	ug/l	1	-	-	ND (0.14)	204	13.2	42.2	5.8 J	ND (0.14)	4490	179	0.40 J	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	0.34 J	ND (0.14)	
Bromochloromethane	ug/l	-	-	-	ND (0.46)	ND (0.46)	ND (2.3)	ND (0.46)	ND (9.3)	ND (0.46)	ND (4.6)	ND (4.6)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	
Bromodichloromethane	ug/l	1	-	-	ND (0.55)	ND (0.55)	ND (11)	ND (0.55)	ND (5.5)	ND (0.55)	ND (5.5)	ND (5.5)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	
Bromoform	ug/l	4	-	-	ND (0.34)	ND (0.34)	ND (1.7)	ND (0.34)	ND (6.8)	ND (0.34)	ND (3.4)	ND (3.4)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	
Bromomethane	ug/l	10	-	-	ND (0.46)	ND (0.46)	ND (2.3)	ND (0.46)	ND (9.3)	ND (0.46)	ND (4.6)	ND (4.6)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	
2-Butanone (MEK)	ug/l	300	-	-	ND (1.9)	14	ND (9.5)	ND (1.9)	ND (38)	ND (1.9)	ND (19)	ND (19)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	
Carbon disulfide	ug/l	700	-	-	ND (0.33)	1.6 J	ND (1.7)	ND (0.33)	ND (6.3)	ND (0.33)	ND (3.3)	ND (3.3)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	
Carbon tetrachloride	ug/l	1	-	-	ND (0.54)	ND (0.54)	ND (2.7)	ND (0.54)	ND (11)	ND (0.54)	ND (5.4)	ND (5.4)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	
Chlorobenzene	ug/l	50	-	-	ND (0.17)	ND (0.17)	ND (0.87)	0.27 J	ND (3.5)	ND (0.17)	ND (1.7)	ND (1.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	
Chloroethane	ug/l	-	5	-	ND (0.44)	ND (0.44)	ND (2.2)	ND (0.44)	ND (8.9)	ND (0.44)	ND (4.4)	ND (4.4)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	
Chloroform	ug/l	70	-	-	ND (0.23)	ND (0.23)	ND (1.1)	ND (0.23)	ND (4.5)	ND (0.23)	ND (2.3)	ND (2.3)	0.38 J	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	
Chloromethane	ug/l	-	-	-</																					

Table 3
AOC 10 - Truck Loading Rack
Hess Corporation - Port Reading Complex (HC-PR)
750 Cliff Road
Port Reading, NJ
2016 Groundwater Sampling Analytical Results

Client Sample ID:				TR-1R	TR-2R	TR-3RR	TR-4R	TR-4D	TR-4DD	TR-5	TR-6	TR-6D	AB-4R	AB-4D	PER-2	PER-2D	PER-3	PER-3D	PER-9	PER-9D	PER-9DD	PER-10	PER-10D
Lab Sample ID:				JC31908-3	JC31908-4	JC31908-10	JC32172-6	JC32172-7	JC32172-8	JC31908-11	JC31908-12	JC31908-13	JC31999-14	JC31999-13	JC31908-5	JC31908-6	JC31908-14	JC31908-15	JC31908-7	JC31908-8	JC31999-9	JC31999-10	JC31999-11
Date Sampled:				11/16/2016	11/16/2016	11/16/2016	11/21/2016	11/21/2016	11/21/2016	11/16/2016	11/16/2016	11/16/2016	11/17/2016	11/17/2016	11/16/2016	11/16/2016	11/16/2016	11/16/2016	11/16/2016	11/16/2016	11/17/2016	11/17/2016	11/17/2016
Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Carbazole	ug/l	-	-	ND (0.23)	0.72 J	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	0.51 J	ND (0.24)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.25)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
Caprolactam	ug/l	-	5000	ND (0.65)	ND (0.65)	ND (0.66)	ND (0.66)	ND (0.66)	ND (0.66)	ND (0.66)	ND (0.69)	ND (0.66)	ND (0.66)	ND (0.66)	ND (0.65)	ND (0.71)	ND (0.66)	ND (0.66)	ND (0.66)	ND (0.66)	ND (0.66)	ND (0.66)	ND (0.66)
Chrysene	ug/l	5	-	ND (0.18)	0.47 J	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)
bis(2-Chloroethoxy)methane	ug/l	-	-	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.30)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.30)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)
bis(2-Chloroethyl)ether	ug/l	7	-	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.26)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.27)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)
bis(2-Chloroisopropyl)ether	ug/l	300	-	ND (0.40)	ND (0.40)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.43)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.40)	ND (0.44)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)
4-Chlorophenyl phenyl ether	ug/l	-	-	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.39)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.40)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)
2,4-Dinitrotoluene	ug/l	-	-	ND (0.55)	ND (0.55)	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.59)	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.55)	ND (0.60)	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.56)
2,6-Dinitrotoluene	ug/l	-	-	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.51)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.52)	ND (0.48)	ND (0.49)	ND (0.49)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)
3,3'-Dichlorobenzidine	ug/l	30	-	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.54)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.55)	ND (0.51)	ND (0.52)	ND (0.52)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)
Dibenzofuran	ug/l	-	-	ND (0.22)	2.5 J	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.23)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.24)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)
Di-n-butyl phthalate	ug/l	700	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.53)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.54)	ND (0.50)	ND (0.51)	ND (0.51)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
Di-n-octyl phthalate	ug/l	100	-	ND (0.23)	ND (0.23)	ND (0.24)																	

^a This compound in BS is outside in house QC limits bias high.

^b Elevated sample detection limit due to difficult sample matrix.

^c Elevated detection limit due to dilution required for high interfering elements.

^d Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).

Exceeds GWQS
Exceeds Interim GWQS